

REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 1-2, 7-8, 11-17 and 20-21 are currently pending in this application. Claims 3, 6 and 9 have been cancelled. No new matter has been added by way of the present amendment. The amendment to claim 1, as well as new claims 20-21, are supported by previously presented claims 2-3, 6 and 9, as well as the Specification at, for example, page 8, lines 3-5, page 13, lines 5-7, and page 14, lines 9-14. Accordingly, no new matter has been added.

In view of the amendments and remarks herein, Applicants respectfully request that the Examiner withdraw all outstanding rejections and allow the currently pending claims.

Issues Under 35 USC 112, second paragraph

Claims 3 and 9 stand rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Applicants respectfully traverse.

Claims 3 and 9 have been cancelled by way of the present amendment. Accordingly, this rejection is moot.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claim Objections

Claim 6 stands objected to as being dependent on a cancelled claim. Applicants respectfully traverse.

Claim 6 has been cancelled by way of the present amendment. Accordingly, this objection is moot.

Reconsideration and withdrawal of this objection are respectfully requested.

Issues Under 35 USC 103(a)

Claims 1-3, 6-9, and 12-17 stand rejected under 35 USC 103(a) as being unpatentable over Vreeland '001 or '457 (USP 5,541,001; USP 5,571,457) or Gloyer '576 (U.S. 2001/0046576) each in view of Barksby '445 (U.S. Patent 6,420,445) and further in view of Wen '897 or '639 (USP 6,077,897 or USP 6,159,639) or Sandlin '451 (USP 6,093,451) or Noh '002 (U.S. 2002/0042002). Additionally, claim 11 has been rejected under 35 USC 103(a) as being unpatentable over the above-cited references, and further in view of Nogami '646 (USP 5,618,646) or Priebe '188 (USP 5,869,188). Applicants respectfully traverse.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Additionally, there must be a reason why one of ordinary skill in the art would modify the reference or combine reference teachings to obtain the invention. A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int'l Co.*

v Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007). There must be a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* The Supreme Court of the United States has recently held that the "teaching, suggestion, motivation test" is a valid test for obviousness, albeit one which cannot be too rigidly applied. *Id.* Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.*

The present invention is directed to a conductive roller formed from a conductive urethane composition and a metal shaft, wherein the composition is formed from polyurethane obtained by a poly-addition reaction of a polyol and polyisocyanate in a specified amount, and the composition contains a metal salt of a bis(fluoroalkyl-sulfonyl)imide and metal salts of fluoroalkyl sulfonic acid as an organic ionic-conductive agent. Furthermore, the inventive conductive roller of the present application requires a conductive urethane composition containing hydrotalcites or zeolites as a negative ion absorbent, having a volume resistivity set to $10^{6.0}(\Omega \cdot \text{cm}) - 10^{8.0}(\Omega \cdot \text{cm})$, and a compression set not more than 15% when said compression set is measured at 70°C for 24 hours in a permanent set testing method for rubber, vulcanized or thermoplastic, specified in JIS K6262.

Applicants have discovered that the addition of a metal salt of fluoroalkyl sulfonic acid as an organic ionic-conductive agent, coupled with the addition of hydrotalcites or zeolites as a negative ion absorbent result in a product exhibiting improved surface roughness, stain resistance properties, and image printing quality, as evidenced by the Examples and Comparative Examples summarized in Tables 1-3 at pages 24-40 of the present specification.

Further, Applicants submit that the method of producing a conductive roller as defined in claim 20 is patentably distinct from conventional methods of the prior art. In the present method of producing a conductive roller, the conductive urethane is produced by a “one-shot” method. In stark contrast, the prior art references teach the production of an urethane composition by a “pre-polymer method”.

Evidently, all of the above-cited references fail to disclose or suggest a conductive roller formed from a polyurethane composition that is formed using a polyisocyanate in the specified amount together with the imide metal salt. Further, none of the cited references disclose or suggest the addition of an organometallic salt of bis(fluoroalkyl-sulfonyl)imide and a metal salt of fluoroalkyl sulfonic acid as an organic ionic-conductive agent, or the addition of hydrotalcites or zeolites as a negative ion absorbent.

Accordingly, reconsideration and withdrawal of this rejection are respectfully requested,

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and objections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Andrew D. Meikle, Reg. No. 32,868 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 

Andrew D. Meikle

Registration No.: 32,868

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant